What is claimed is:

1. A method of fabricating an optical waveguide, said method comprising the steps of:
forming a core layer on a substrate or a first clad layer;
forming a masking layer on said core layer;
forming a photoresist layer on said masking layer;
patterning said photoresist layer by using a photomask;
patterning said masking layer wider than a required core width by using the patterned photoresist layer;
removing said masking layer after patterning said core layer to form a core by using the patterned masking layer; and
forming a second clad layer on said first clad layer so as to bury the patterned core.

2. A method of fabricating an optical waveguide as claimed in claim 1, wherein the width of the patterned masking layer is characterized by that the width of the core patterned by using said masking layer is equal to the required core width.

3. A method of fabricating an optical waveguide as claimed in claim 1, wherein when the cores sandwich a gap, said masking layer is patterned, so that a center position along the width of said patterned masking layer will be farther away from the gap than a center position along the width of the core.

4. A method of fabricating an optical waveguide as claimed in claim 1,

wherein said masking layer is patterned wider than the required core width by optimizing at least either one of the following: a mask pattern of a photomask used in patterning the photoresist layer, the patterning condition of the photoresist layer, or the patterning condition of said masking layer.

5. A method of fabricating an optical waveguide as claimed in claim 1, wherein said masking layer and said core layer are patterned by reactive ion etching.

6. A method of fabricating an optical waveguide as claimed in claim 1, wherein the required core width is 8μm when refractive index difference is 0.3%, 7μm when the refractive index difference is 0.4%, 6μm when the refractive index difference is 0.7%, and 5μm when the refractive index difference is 1.0%.

7. A method of fabricating an optical waveguide as claimed in claim 1, wherein the width of said masking layer is 1.2 to 1.4μm wider than the required core width, when it is 7 to 8μm.

8. An optical waveguide at least comprised of a core and a clad, characterized by that the core is patterned by using a photomask, and that width of a part corresponding to the core of the photomask is wider than the core width.

9. An optical waveguide as claimed in claim 8, wherein the width is more than 0.5μm wider than the core width.

10. An optical waveguide at least comprised of a core and clad, wherein the core width d is:

$d<1.45\lambda/(2(\sqrt{(n_{core}^2 - n_{clad}^2)}))$

where a refractive index of the core is n_{core}, that of the clad is n_{clad}, and cutoff wavelength of the optical waveguide is λ,

and width M of a corresponding part of the masking layer that patterns the core will be:

$M>1.45\lambda/(2(\sqrt{(n_{core}^2 - n_{clad}^2)}))$.

11. An optical waveguide as claimed in claim 10, wherein the cutoff wavelength is 80 to 90% of the wavelength in use.